DOCUMENT RESUME

ED 170 701 CS 004 793

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TITLE Paradigmatic Responding as a Predictor of First Grade Reading Achievement.
PUB DATE Mar 79
NOTE 12p.; Paper presented at the Annual Meeting of the National Conference on Language Arts in the Elementary School (11th, Hartford, Connecticut, March 23-25, 1979)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Associative Learning; *Beginning Reading; Cognitive Processes; Early Childhood Education; Form Classes (Languages); Kindergarten Children; *Language Development; *Predictor Variables; *Reading Ability; *Reading Achievement; Reading Instruction; Reading Research; Reading Skills; Syntax

ABSTRACT

To ascertain whether paradigmatic performance on a word association test administered at the end of kindergarten is an effective predictor of reading achievement, 37 children were tested on the Syntagmatic-Paradigmatic Assessment (SPA) at the end of their kindergarten year. At the end of their first grade year, the children were administered a standardized reading test as a group and individually were given two oral reading tests. Correlations among the test findings were then computed. The results suggested that paradigmatic ability at the beginning stages of reading instruction does not influence first grade reading success. (PL)

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ED170701

PARADIGMATIC RESPONDING AS A PREDICTOR OF FIRST GRADE READING ACHIEVEMENT

Maria A. Ceprano

Word association research has provided some interesting insights into the way developing individuals relate to words. Young children under the age of five tend to associate syntagmatically to words presented as stimuli. Essentially, what this means is that their responses differ in form class from the words used as stimuli. Often, the responses are grammatically contiguous with the word stimuli completing thoughts provoked by them (e.g. red-ball; jump-up). The tendency to respond syntagmatically suggests the child's familiarity with words is based upon his exposure to them in spoken discourse. It cannot be inferred that the child who responds syntagmatically to words possesses a clear understanding of the words' meanings.

Between the ages of five and eight, children display an increasing tendency to associate paradigmatically. Their responses are now more often of the same form class as the stimulus and bear a relationship with it which is whole-part (tree-branch); coordinate (car-truck); contrast (black-white) or superordinate (minute-time) (Dinnon, Cowart, & Bickley, 1971). The tendency to respond paradigmatically suggests that individuals can abstract common features from

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sets of words (Gibson & Levin, 1975). The ability to do as such also suggests that words have become more meaningful to the child.

Language acquisition research has established that the "shift" from a syntagmatic to a paradigmatic mode of responding gradually manifests itself, first in children's associative responses to nouns and then in their responses to adjectives and verbs respectively (McNeill, 1970; Entwistle, 1966; Ervin, 1963). The shift from syntagmatic to paradigmatic responding is generally attributed to the development of the lexical memory system and the ability to attach more semantic features to words in the lexicon (McNeill, 1966). The emergence of the shift is also thought to reflect an increased capacity to communicate clearly with spoken and written language.

There has been some speculation that the appearance of the shift indicates the emergence of the reading readiness stage (Cazden, 1972, p. 88). Indeed some theorists suggest that the cognitive abilities which allow paradigmatic as well as syntagmatic responding are those which are necessary for effective functioning in various reading skill areas (Dinnon, 1970-1971). Limited research supports these theories. Bickley, Dinnon and Jones (1971) studied the relationship between performance on a reading readiness test and syntagmatic-paradigmatic performance on a free word association test. Subjects were 52 first graders without kindergarten experience. Based on the median score of the

Metropolitan Readiness Test, subjects were divided into low and high readiness groups. Associative responses to a list of thirty words were elicited and classified as either syntagmatic or paradigmatic. Analysis by t-test indicated the mean syntagmatic score for the low readiness group was significantly lower than for the high readiness group. These findings suggested a child's level of lexical maturity at the end of kindergarten an effective predictor of first grade reading success. While research with older subjects has demonstrated that word association tests are fair predictors of reading achievement (Sun Shen & McNinch, 1971; Bickley, Bickley, & Cowart, 1971) the predictive value of such measures for first grade reading success has not been satisfactorily established.

The purpose of this study was to ascertain if paradigmatic performance on a word association test administered at the end of kindergarten is an effective predictor of reading achievement.

Method

Subjects

Thirty-seven children from a suburban-rural school in Western New York participated in this study. The subjects were randomly selected from a population of 228 kindergarteners enrolled in the school.

Instruments

The Syntagmatic-Paradigmatic Assessment (SPA): Entwistle

(1966) suggests that kindergarten children's inability to respond paradigmatically displays itself least with nouns. Because stimulus word items were sought which would separate pre-readers according to syntagmatic-paradigmatic ability, the SPA constructed for this study was comprised exclusively of adjectives and verbs. Murphey's list The Spontaneous Speaking Vocabulary of Children in the Primary Grades (1957), offered a total of 102 adjectives and verbs with a computed frequency of at least 200 for children at the first grade level from which to select word stimuli. The twenty-six words selected (13 adjectives and 13 verbs) were those rated by three graduate students in the area of linguistics and language arts as least volatile in their form class. Figure 1 shows the list of words used as stimuli:

Insert Figure 1 here

Reading Achievement Measures

First Grade Reading Achievement was assessed on the Gates McGinitie Reading Test (Form 1), The Slosson Oral Reading Test and the Gray Oral Reading Test. Each of these tests taps specific facets of reading ability. Specifically, the Gates offers measures of performance in both vocabulary knowledge and literal comprehension. The Slosson measures recognition of words in isolation while the Gray measures recognition of words in context. Performance in each of

the skills measured by these tests in relation to paradigmatic performance at the end of kindergarten was of interest. For purposes of evaluating total reading performance in relation to paradigmatic ability, a composite reading score was derived by appropriately weighting the Gates Vocabulary, the Gates Comprehension and the Slosson Performances of each child and adding them together. Considered in the appropriate weighting of these tests was the inverse proportion of variance for each score.

Procedures

All subjects were individually tested on the SPA in May of their kindergarten year using procedures modeled in Entwistle (1966). The subjects were asked to listen to the stimulus word and respond orally with the first word which came to mind. The examiner then recorded the child's response next to the stimulus word on the record sheet. The responses were later scored as either paradigmatic or syntagmatic according to the scheme suggested by Bickley, Bickley and Cowart (1971). For this analysis all paradigmatic responses were given a point value of one while all other responses were scored as zero. For each child the sum total of all paradigmatic responses yielded his Total Paradigmatic Score.

In May of their first grade year the subjects were administered the Gates McGinitie Reading Test in group sessions. The Slosson and the Gray were administered

individually. Standardized procedures were followed in administering the first two tests (Gates and Slosson) and the raw score attained by each subject on these measures was used for the analysis. On the other hand, administration of the Gray did not follow specific standardized format. For this study the last passage read by a child with less than seven errors yielded the grade equivalent score used in the analysis.

Correlations were computed to assess the relationship between paradigmatic responding at the end of kindergarten and first grade reading success.

Results

The means and standard deviations for the various measures used in this analysis are displayed in Table 1. Also shown are the computed correlations between paradigmatic responding on the SPA and the various measures of reading achievement.

Insert Table 1 here

As can be seen from Table 1, all correlations between the SPA and the various reading achievement measures were non-significant. The SPA administered at the end of kindergarten was not an effective predictor of first grade reading success.

The results of this study suggest that paradigmatic ability at the beginning stages of reading instruction does not influence the rate at which various skills (required for first grade reading success) are acquired. Previous research has shown that for upper grade children, paradigmatic ability contributes significantly to school success. The findings of this study lead to some speculations about the comparative differences between skills implicitly required for achievement in first grade reading and those required at later grade levels and their relationship to paradigmatic ability. Whereas success at higher grade levels is determined by abilities which facilitate higher level comprehension skills (e.g. interpretation, inference, etc.), the skills required for first grade reading success as defined by three popular measures of reading achievement center on basic word recognition and not much beyond comprehension of literally stated fact. It would seem that the relationship of paradigmatic ability to performance on higher level comprehension processes needs further attention and study at all levels of instruction.

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Figure 1

SPA Stimuli

1. black	1. come
2. good	2. get
3. long	3. look
4. wet	4. take
5. dirty	5. bring
6. cute	6. carry
7. wild	7. eat
8. clean	8. thank
9. bad	9. liked
10. hungry	10. erase
11. nice	11. find
12. round	12. grow
13. funny	13. listen

Table 1

Means and Standard Deviations on Various Measures and Computed Correlations Between SPA and Various Measures of Reading Achievement

Test	X	SD	R
SPA	2.8	3.9	-
Gates Vocabulary	34.6	10.6	-.01
Gates Comprehension	19.3	8.5	.06
Slosson Oral Reading	34.3	24.8	-.09
Gray Oral Reading	19.4	7.8	-.02
Composite Reading	142.2	57.5	-.04